

Amendments to the Drawings

The attached sheets of drawings include changes to FIGS. 1, 2, and 5. These sheets replace the previously-provided sheets including FIGS. 1, 2, and 5.

Attachments: Replacement Sheets
 Annotated Sheets Showing Changes

REMARKS

Summary of the Office Action

Claims 1-32 were pending in this application.

The Examiner objected to FIGS. 1 and 2 for not being designated as "Prior Art."

The Examiner also objected to the drawings under 37 C.F.R. § 1.83(a) for not showing every feature of the invention specified in the claims. Specifically, the Examiner objected to the drawings for not showing the "plurality of sequential identification packets."

The Examiner objected to the abstract of the disclosure because of applicants' use of the term "packet." Specifically, the Examiner contends that applicants have improperly used the term packet.

The Examiner objected to claims 1, 6, 11, 14, 17, 22, 27, and 30 for having various informalities.

The Examiner rejected claims 1-3, 6, 10, 11, 14, 17-19, 22, 26-28, and 30 under 35 U.S.C. § 102(b) as being anticipated by Kato U.S. Patent No. 5,844,918 (hereinafter "Kato").

The Examiner rejected claims 4, 5, 7-9, 12, 13, 15, 16, 20, 21, 23-25, 29, 31, and 32 under 35 U.S.C. § 103(a) as being obvious in view of Kato.

Summary of Applicants' Reply

Applicants have amended the specification to correct a minor clerical error. No new subject matter has been added and the amendment is fully supported by the original specification.

Applicants have amended FIGS. 1, 2, and 5 in response to the Examiner's objections to the drawings. No new subject matter has been added and these figures are fully supported by the original specification.

(These Remarks are followed by an Appendix providing Replacement Sheets and Annotated Sheets Showing Changes.)

Applicants have amended claims 1, 3, 6, 10-12, 14-17, 19, 22, 26, 27, and 30 to more particularly define applicants' claims and to correct minor clerical errors. No new subject matter has been added and the amendments are fully supported by the original specification.

The Examiner's rejections are respectfully traversed.

Applicants' Reply to Objections to the Drawings

The Objections to FIGS. 1 and 2

FIGS. 1 and 2 were objected to for not being designated as "Prior Art." Applicants have amended FIGS. 1 and 2 to insert the "Prior Art" designation. Accordingly, applicants respectfully request that the Examiner's objection to FIGS. 1 and 2 be withdrawn.

The Objection to Set Forth in ¶ 2

The drawings were objected to under 37 C.F.R. § 1.83(a) for not showing every feature of the invention specified in the claims. Specifically, the Examiner objected to the drawings for not showing the "plurality of sequential identification packets." Applicants have amended FIG. 5 to insert the sequence numbers of IDLE/SYNC packets 420.

Applicants respectfully submit that the amendments to the drawing fully comply with 37 C.F.R. § 1.83(a). Accordingly, applicants respectfully request that the Examiner's objection to the drawings under 37 C.F.R. § 1.83(a) be withdrawn.

Applicants' Reply to Objections to the Abstract

The abstract was objected to because of applicants' use of the term "packet." Specifically, the

Examiner contends that applicants have improperly used the term "packet." This objection is respectfully traversed.

Applicants respectfully submit that the term "packet" is not present in the abstract. Accordingly, applicants respectfully request that the Examiner's objection to the abstract be withdrawn.

Furthermore, applicants submit that the Examiners definition of the term "packet" as "impl[ying] that each block of bits so called is independently routable" and the Examiners statement that applicants' packets "are apparently not independently routable" are without basis. Applicants reserve the right to submit arguments showing that these statements are incorrect should the Examiner maintain this objection.

Applicants' Reply to the Objections to the Claims

Claims 1, 6, 11, 14, 17, 22, 27, and 30 were objected to for having various informalities. Applicants have amended claims 1, 6, 11, 14, 17, 22, 27, and 30, amongst other, to more particularly define applicants' invention. Applicants respectfully submit that amended claims 1, 6, 11, 14, 17, 22, 27, and 30 do not contain informalities and respectfully request that the objections to claims 1, 6, 11, 14, 17, 22, 27, and 30 be withdrawn.

Applicants' Reply to the 35 U.S.C. § 102(b) Rejections

Claims 1-3, 6, 10, 11, 14, 17-19, 22, 26-28, and 30 were rejected under 35 U.S.C. § 102(b) as being anticipated by Kato.

Applicants' amended independent claim 1 is directed toward circuitry for maintaining data integrity

across data links. An encoding circuit divides a data frame into a plurality of data sub-packets and a plurality of sequential identification packets are inserted in between the plurality of data sub-packets. A transmitter transmits the data sub-packets with the inserted plurality of sequential identification packets and a receiver receives at least a sub-plurality of these packets. A decoding circuit identifies each of the received sequential identification packets and stores the received data sub-packets in the sequence of the data frame in response to identifying the received sequential identification packets.

Kato refers to a digital transmission system that takes basic data, appends a BCH-based parity code and divides the data into smaller packets. An error detecting code is appended to each of the divided packets. If an error is detected in any of the divided packets, a request for retransmission is sent. However, the system of Kato does not show inserting sequential identification packets between the divided packets. Kato does not show that the packet header appended to the divided packets are sequential or that they are used for identification of the packets. Rather, the packet headers of Kato are merely used to implement error detections and correction coding.

Furthermore, the system of Kato does not show "storing each of the received data sub-packets in the sequence of the received identification packets." In contrast to the system of applicants' amended independent claim 1, in which the received data can be decoded from a sub-plurality of received packets, the system of Kato requires retransmission of erroneous packets and therefore does not use identification packets to store the received data in a sequence.

For at least these reasons, applicants respectfully request that the rejection of amended independent claim 1 under 35 U.S.C. § 102(b) be withdrawn.

Applicants respectfully request that the rejection of amended independent claims 6, 11, 14, 17, 22, 27, and 30 under 35 U.S.C. § 102(b) be withdrawn for at least the same reasons as amended independent claim 1.

Claims 2, 3, 10, 18, 19, 26, 28 depend, directly or indirectly from amended independent claims 1, 6, 17, 22, and 27, respectively. For at least this reasons, applicants respectfully request that the rejection of claims 2, 3, 10, 18, 19, 26, 28 under 35 U.S.C. § 102(b) be withdrawn.

Applicants' Reply to the
35 U.S.C. § 103(a) Rejections

Claims 4, 5, 7-9, 12, 13, 15, 16, 20, 21, 23-25, 29, 31, and 31 under 35 U.S.C. § 103(a) were rejected as being obvious in view of Kato.

The Examiner acknowledged that Kato fails to show various features of applicants claims 4, 5, 7-9, 12, 13, 15, 16, 20, 21, 23-25, 29, 31, and 32. These features include: a) "counting time or counting the amount of data while receiving the packets", b) Reed-Solomon coding, c) "interleaving FEC-encoded data among data packets, d) "encoding a clock signal within the data to be transmitted or deriving a clock signal from the transmitted data", and e) "manipulating data as bytes or words before or after serial transmission, thus requiring a "serializer" and a "de-serializer."" For all of these features the Examiner has taken Official Notice that each of these features were "well-known at the time the

invention was made." Applicants respectfully traverse the Examiner's Official Notices.

The Examiner may only take Official Notice of facts outside of the record which are "capable of such instant and unquestionable demonstration as to defy dispute" (MPEP § 2144.03(A)). Applicants submit that there is no objective basis to conclude that these concept were well known beyond dispute as of applicants' date of invention. Therefore, applicants traverse the Official Notices because it is at least disputable whether the noticed concept was well-known at the time of applicants' invention. If the Examiner maintains the rejection, applicants respectfully request that the Examiner provide references in support of the Official Notices (see MPEP § 2144.03(C)).

Second, even assuming, arguendo, that it could be established that these features of applicants claims "well-known at the time the invention was made," applicants respectfully submit that there would be no motivation for one of ordinary skill in the art to combine such teachings with the disclosure of Kato. "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." MPEP § 2143.01(III). Instead of providing motivation for combining Kato with each of these features, the Examiner has stated that the advantages of these features were well known. However, this is not a proper motivation to combines Kato with these features.

Indeed, applicants respectfully submit that, in making this rejection, the Examiner appears to be applying "impermissible hindsight vision afforded by the claimed invention," which is disallowed by MPEP § 2141.01(II). In establishing the motivation for a rejection under 35 U.S.C. § 103(a), "[t]he teaching or

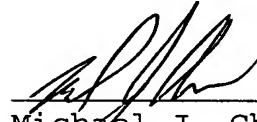
suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure." MPEP § 2142. Applicants respectfully submit that "[combining] prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight." *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). Accordingly, applicants respectfully submit that the Examiner has failed to establish sufficient motivation for one of ordinary skill in the art to make the combination suggested by the Examiner.

For at least this reason, applicants respectfully request that the rejection of claims 4, 5, 7-9, 12, 13, 15, 16, 20, 21, 23-25, 29, 31, and 32 under 35 U.S.C. § 103(a) be withdrawn. Applicants also respectfully request that the rejection of claims 4, 5, 7-9, 12, 13, 15, 16, 20, 21, 23-25, 29, 31, and 32 be withdrawn for at least the additional reason that these claim dependent directly or indirectly from allowable independent claims 1, 6, 11, 14, 17, 22, 27, and 30, respectively.

Conclusion

The foregoing demonstrates that this application is patentable. Accordingly, reconsideration and allowance of this application are respectfully requested.

Respectfully submitted,



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Appendix

Attachments: Replacement Sheets
 Annotated Sheets Showing Changes



100

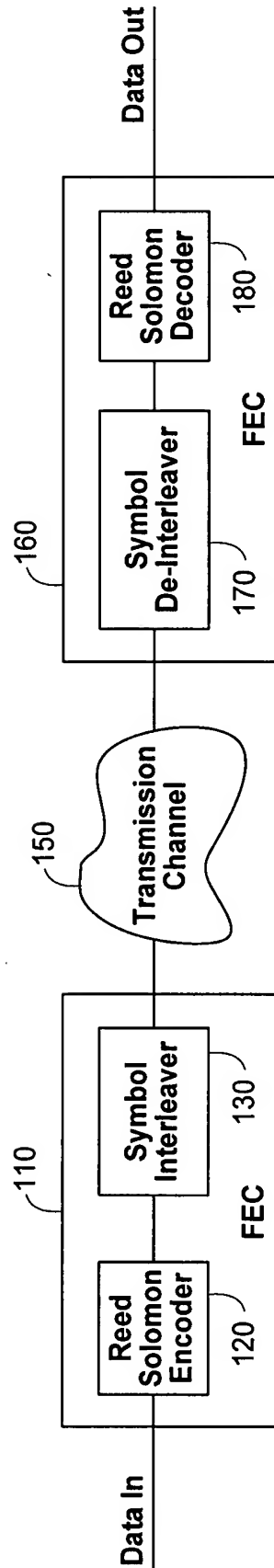


FIG. 1
(Prior Art)

200

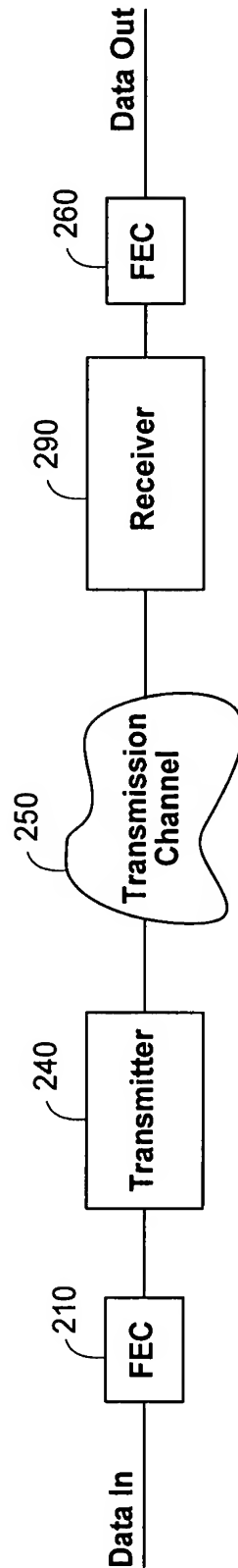


FIG. 2
(Prior Art)

500

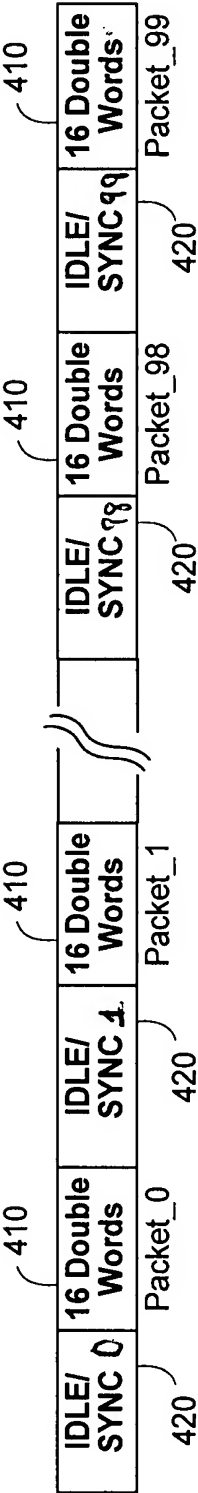


FIG. 5